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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,437	09/23/2003	Michael C. Kautzky	169.12-0593	2388
164 7590 09/16/2009 KINNEY & LANGE, P.A. THE KINNEY & LANGE BUILDING 312 SOUTH THIRD STREET MINNEAPOLIS, MN 55415-1002				
EXAMINER				
DAVIS, DAVID DONALD				
ART UNIT		PAPER NUMBER		
2627				
MAIL DATE		DELIVERY MODE		
09/16/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/668,437

Applicant(s)

KAUTZKY ET AL.

Examiner

David D. Davis

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on June 25, 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8, 10-24 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 3-8 and 10 is/are allowed.
- 6) ☒ Claim(s) 11-13, 15, 16 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☒ Claim(s) 17-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's arguments, see page 7-12, filed June 25, 2009, with respect to claims 1, 3-8, 10 and 27-29 have been fully considered and are persuasive. The rejection of 1, 3-8, 10 and 27-29 has been withdrawn.

Election/Restrictions

2. Claims 17-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on May 16, 2005.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Funayama et al (US 2002/0097533). Funayama et al shows in figure 3 and describes in section [0013] a magnetic sensor including a sensor stack and at least one electrode 2 configured to generate an

electrical field generally perpendicular to a direction of sense current flow through the sensor stack to produce a charge carrier-deplete region in the magnetic sensor that confines the sense current to a smaller area in the magnetic sensor. Figure 3 also shows at least one electrode including two bias electrodes 2 disposed on opposing sides of the sensor stack such that an electrical width of the sensor stack is a function of a bias voltage applied to the two bias electrodes. Additionally, the at least one electrode includes bias electrode 2 positioned such that an electrical height of the sensor stack is a function of a bias voltage applied to the bias electrode.

5. Claims 11-13, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kadokawa (US 6,661,627). As per claim 11, Kadokawa shows in figure 5 a magnetoresistive read head includes a magnetoresistive stack 1; and a first bias electrode 3 positioned with respect to the magnetoresistive stack to generate an electric field in a direction generally transverse to a direction of sense current flow through the sensor stack 1 such that a read width of the magnetoresistive stack is a function of a bias voltage applied to the first bias electrode 3. As per claim 12, Kadokawa shows in figure 5 that the first bias electrode 3 is disposed on a side of the magnetoresistive stack.

As per claim 13, Kadokawa shows in figure 5 that a second bias electrode 3 is disposed on a side of the magnetoresistive stack opposite the first bias electrode. The first and second bias electrodes 3 each provide a voltage. As per claim 15, Kadokawa shows in figure 5 that a second bias electrode 3 disposed on a side of the magnetoresistive stack 1 opposite the first bias electrode 3. The second bias electrode 3 has a bias voltage of opposite polarity to a bias voltage

applied to the first bias electrode 3. As per claim 16, Kadokawa discloses in column 4, lines 39-43 that first bias electrode is made of a material selected from the group consisting of Rh, Ti, CoPt, CoCrPt, Cr, NiPd, NiCu, Au, Pt, Pd, V, Ta, and alloys thereof.

Response to Arguments

6. Applicant's arguments filed June 25, 2009 have been fully considered but they are not persuasive. In the paragraph bridging pages 10 and 11 applicant asserts that the applied prior art "does not teach the use of an electric field to create a charge carrier depleted region". First applicant has not claimed a charge carrier depleted region in claim 11. Second, applicant has not defined in the claimed invention what a charge carrier depleted region giving the term a specific meaning so as to define over the applied prior art. Third, insofar as the claim is understood the applied prior art has a charged carrier region so as read information from a medium by way of the sensor stack.

Allowable Subject Matter

7. Claims 1, 3-8 and 10 are allowed.
8. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is 571-272-7572. The examiner can normally be reached on Monday thru Friday between 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David D. Davis/
Primary Examiner
Art Unit 2627

ddd